REMARKS

Claims 10-29 are presently in the application. The above amendments are being made to place the application in better condition for examination.

Reconsideration of the rejection of claims 10-29 under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art (AAPA) in view of Zenith (GB 750,673), is respectfully requested.

Claim 10 is directed to a fluid pump for use in a fuel injection apparatus of an internal combustion engine having a housing that contains ***a pump chamber in which at two rotary driven delivery elements are contained***, which delivery elements deliver fluid to a delivery chamber from an intake chamber connected to a reservoir, a pressure limiting valve for limiting the pressure prevailing in the pressure chamber, which valve has a valve piston inside the housing, the valve piston being acted on in the closing direction by a prestressed closing spring and being acted on in the opening direction by the pressure prevailing in the pressure chamber and, when a predetermined pressure in the delivery chamber is exceeded, opens a connecting conduit from the delivery chamber to the intake chamber, a filter preceding the fluid pump and/or a filter, following the fluid pump, and *a connection from the pressure chamber to a region* downstream of the preceding filter or a *connection from the pressure chamber to a region* downstream of the following filter, wherein ***the pressure prevailing in the pressure chamber influences the force on the valve piston in the closing direction in such a way that as the pressure in the pressure chamber decreases, the force on the valve piston in the closing direction increases***, and ***wherein the valve piston is offset from a connecting line between the axes of rotation of the two delivery elements***.

Applicant has refined the claimed limitation of the offset valve piston to recite in claim10 that the valve piston 60 is disposed offset relative to a connecting line 58 between the axes of rotation 25, 27 of the two pumping elements 16, 18. The description of this limitation is found in paragraph [0016] of the specification.

AAPA describes the fundamental prior art.

Zenith is relied upon by the examiner for disclosing a fluid pump having intake chamber (14), pressure chamber (25), valve piston (23), moving wall (24), closing spring (26), rod (R), pump chamber (13), delivery element (5, 6), and a connecting conduit (21) between the pressure chamber (25) and the intake chamber (14).

Zenith does not disclose the pressure chamber (25) having a connection to a region downstream of a preceding filter or a connection to a region downstream of a following filter. The examiner asserts that if combined with AAPA described above, Zenith's pressure chamber would inherently have a connection to a region downstream of the preceding filter or a connection to a region downstream of the following filter. Applicant disagrees because of the following.

The Examiner's argument in combining the fundamental prior art in the application with the Zenith reference, G8 750,673, is incorrect, as stated in the response to the prior Office actions. In the prior art applied in the present application, there is no filter, and this characteristic is integral to the definitive body portion of claim 10, as emphasized above. Comparing the Zenith reference with the pump according to present claim 10 clearly shows that a chamber, corresponding to the pressure chamber 85 of the pump of the invention, is not present in the Zenith reference. The chamber 25 in Zenith communicates with the pressure chamber 15 of the

pump via a throttle restriction 29, so that with increasing pressure in the pressure chamber 15, the pressure in the chamber 25 rises and well, as thus, the closing force on the valve piston 23 is reduced. In the Zenith reference, the chamber 34 communicates with the atmosphere via bores 35. Thus, in the Zenith reference, a simple pressure limiting valve is realized, in which only as a function of the pressure in the pressure chamber 15 is the valve piston 29 pressed more or less strongly in the closing direction.

Deviating from this, in the present invention the pressure chamber 85 is additionally provided, which communicates with a region downstream of the filter. Thus, in the pump of the present invention, a control of the valve piston that is dependent on the pressure drop through the filter is additionally achieved, which is not provided in Zenith.

Applicant believes that even a combination of the prior art (the fact that a filter is typically disposed upstream or downstream of the pump) described in the application with the Zenith reference does not lead directly to the characteristics of claim 10 in terms of the embodiment that the pressure chamber communicates with a region downstream of the filter an thus a compensation for different pressure drops is effected by the filter. Therefore the requirements with respect to this limitation under 35 U.S.C 103 have not been met.

Furthermore, none of the prior art show or suggest the feature of amended claim 10 of the valve piston being offset from a symmetrical center of the pump chamber.

This feature is described in paragraph [0016] of the specification and is integral to the performance of the pump, as the valve piston being offset from the center optimizes the positioning of the valve piston against the end surfaces of the gears. The pump is designed with a bore 56 let into the bottom of the groove 52. The bore 56 extends at least approximately parallel

to the rotation axes 25, 27 of the gears 16, 18 and is preferably situated offset from a connecting line 58 between the rotation axes 25, 27 of the gears 16, 18 by a measurement H in the direction of the pressure chamber 42. The valve piston 60 that functions as the valve member of the pressure limiting valve 50 is guided so that it can slide in the bore 56. The end surfaces of the gears 16, 18 are embodied as at least approximately flat and are positioned at least approximately perpendicular to their rotation axes 25, 27. The valve piston 60 rests against the end surfaces of the gears 16, 18 in the region in which their teeth engage with one another. The chamber 64 delimited in the bore 56 by the valve piston 60 at its rear end oriented away from the gears 16, 18 communicates with the intake chamber 40 via a bore 66 in the housing part 10.

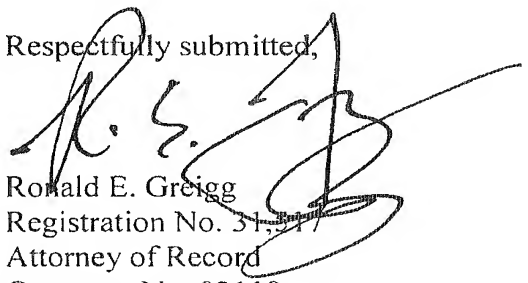
Applicant finds that in Zenith, the valve piston 23 is symmetrical with the pressure chamber 25 and the chamber 34 in Fig. 4. Clearly in Zenith the valve piston is aligned with the rotational axes of the gears 5, 6 in Figs, 2-3. The prior art fail to disclose or suggest the valve piston is offset with respect to the rotational axes of the rotary elements 14, 16 in the invention, as shown in Fig. 1.

Neither the fundamental prior art (AAPA) nor Zenith show or suggest when taken alone or combined the combination of the elements according to claim 10 including the arrangement of the filter with the fluid pump having a pressure chamber, where the pressure prevailing in the pressure chamber influences the force on the valve piston in the closing direction in such a way that as the pressure in the pressure chamber decreases, the force on the valve piston in the closing direction increases, *and where the valve piston is offset from a connecting line between the axes of rotation of the two delivery elements.*

Therefore, it is respectfully requested that the rejection of the claims be withdrawn.

Entry of the amendment is respectfully solicited.

Respectfully submitted,



Ronald E. Greigg
Registration No. 31,517
Attorney of Record
Customer No. 02119

GREIGG & GREIGG P.L.L.C.
1423 Powhatan Street
Suite One
Alexandria, VA 22314

Telephone: (703) 838-5500
Facsimile: (703) 838-5554

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